

AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) A method of aligning a plurality of physical channels, comprising:

aligning first and second uplink physical channels based on a timing offset that aligns subframes of a shared control channel (SCCH) with a start of a plurality of subframes of a common control channel that is used as a timing reference for all physical channels received in the downlink or physical channels to be transmitted in the uplink, the timing offset representing a processing time required at a user equipment to decode a subframe of the shared control channel; and

transmitting said first and second channels over an uplink at a time instant different than that of a third uplink physical channel, such that none of subframes of said first and second channels transmitted in the uplink overlap with uplink transmission of a subframe of said third channel, said first and second channels including a control channel and a data channel, said timing offset preventing said control channel from being transmitted in the uplink at a same time as said third channel.

2. (Previously Presented) The method of claim 1, wherein said aligning step further includes synchronizing subframe boundaries of said subframes of said first and second uplink physical channels so that said subframes are transmitted in the uplink at a same time instant.

3. (Cancelled)

4. (Previously Presented) The method of claim 1, wherein
the control channel is configured to support enhanced uplink (EU) services and
the data channel is configured to support enhanced uplink (EU) services, and said
third physical channel is an uplink control channel configured to support high speed
downlink packet access (HSPDA) services.

5-6. (Cancelled)

7. (Currently Amended) The method of claim 1-6, wherein the SCCH is
configured to provide control signaling in the downlink to support enhanced uplink
(EU) services.

8. (Currently Amended) A method of multiplexing a plurality of physical
channels for uplink transmission, comprising:

aligning first and second physical channels based on a timing offset that aligns
subframes of a shared control channel (SCCH) with a start of a plurality of subframes
of a common control channel that is used as a timing reference for all physical
channels received in the downlink or physical channels to be transmitted in the
uplink, the timing offset representing a processing time required at a user equipment
to decode a subframe of the shared control channel;

transmitting said first and second channels in the uplink at a time instant
different than a time of uplink transmission for a third physical channel, such that

none of subframes of said first and second channels transmitted in the uplink overlap with uplink transmission of a subframe of said third channel; and

code multiplexing said first and second physical channels with additional physical channels other than said third physical channel at said different time instant to generate a code-multiplexed signal to be used for uplink transmission, said first and second channels including a control channel and a data channel, said timing offset preventing said control channel from being transmitted in the uplink at a same time as said third channel.

9. (Previously Presented) The method of claim 8, wherein said aligning step includes synchronizing subframe boundaries of subframes of said first and second uplink physical channels so that said subframes are transmitted in the uplink at the same time instant.

10. (Cancelled)

11. (Previously Presented) The method of claim 8, wherein the control channel is configured to support enhanced uplink (EU) services and the data channel is configured to support enhanced uplink (EU) services, and said third physical channel is an uplink control channel configured to support high speed downlink packet access (HSPDA) services.

13. (Cancelled)

14. (Currently Amended) The method of claim ~~8-13~~, wherein the SCCH is configured to provide control signaling in the downlink to support enhanced uplink (EU) services.

15. (Currently Amended) A method for scheduling transmission of a plurality of physical channels in the uplink, comprising:

assigning timing offset information to a user for aligning first and second uplink physical channels that aligns subframes of a shared control channel (SCCH) with a start of a plurality of subframes of a common control channel that is used as a timing reference for all physical channels received in the downlink or physical channels to be transmitted in the uplink, the timing offset representing a processing time required at a user equipment to decode a subframe of the shared control channel; and

transmitting said first and second channels in the uplink at a time instant different than a time of uplink transmission for a third uplink physical channel, such that none of subframes of said first and second channels transmitted in the uplink overlap with uplink transmission of a subframe of said third channel, said first and second channels including a control channel and a data channel, said timing offset preventing said control channel from being transmitted in the uplink at a same time as said third channel.

16. (Previously Presented) The method of claim 15, wherein the control channel is configured to support enhanced uplink (EU) services and the data channel is configured to support enhanced uplink (EU) services, and said third physical channel is an uplink control channel configured to support high speed downlink packet access (HSPDA) services.

17-18. (Cancelled)

19. (Currently Amended) The method of claim 15-18, wherein the SCCH is configured to provide control signaling in the downlink to support enhanced uplink (EU) services.

20. (Currently Amended) A method of avoiding an increase in peak-to-average power ratio if multiplexing a plurality of physical channels for uplink transmission, comprising:

aligning first and second physical channels based on a timing offset that aligns subframes of a shared control channel (SCCH) with a start of a plurality of subframes of a common control channel that is used as a timing reference for all physical channels received in the downlink or physical channels to be transmitted in the uplink, the timing offset representing a processing time required at a user equipment to decode a subframe of the shared control channel;

multiplexing said first and second channels; and

transmitting said first and second channels in the uplink at a time instant different than a time of uplink transmission for a third physical channel, such that none of subframes of said first and second channels transmitted in the uplink overlap with uplink transmission of a subframe of said third channel, said first and second channels including a control channel and a data channel, said timing offset preventing said control channel from being transmitted in the uplink at a same time as said third channel.